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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/751,385 | 01/05/2004 | Thomas A. Rodby | 71881 | 2640 |
| 27975 | 7590 | 12/14/2004 | EXAMINER | |
| ALLEN, DYER, DOPPELT, MILBRATH & GILCHRIST P.A. 1401 CITRUS CENTER 255 SOUTH ORANGE AVENUE P.O. BOX 3791 ORLANDO, FL 32802-3791 | | | NGUYEN, LONG T | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2816 | |

DATE MAILED: 12/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/751,385

Applicant(s)

RODBY, THOMAS A.

Examiner

Long Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 September 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by McQuaid et al. (USP 5,757,227).

With respect to claim 1, Figure 7A of the McQuaid et al. reference discloses a circuit (6), which includes: an input port (67); an output port (69); an op-amp (73) having an input terminal connected to an input resistor (213) and an output terminal (output of 73) coupled to the output port (69, by way of 216); a capacitor (13) and a first output resistor (22) coupled in series between the input terminal (by way of 213) and the output terminal of the op-amp (73); and a second output resistor (27) coupled between a reference potential terminal (ground) and a common connection of the capacitor (13) and the first output resistor (22). Note that because the structure of the claim is fully met and that the circuitry in Figure 7A also including a feedback capacitor so the circuitry in Figure 7A also functions as an integrator (also see Col. 5, lines 8-13).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over McQuaid et al. (USP 5,757,227) in view of Shulman (USP 6,304,128).

With respect to claims 2 and 3, the circuitry in Figure 7A of the McQuaid et al. reference meets all the limitations of these claims (as discussed in claim 1 above with regard to the 102 rejection) except for the limitation that the first and second output resistors are adjustable/variable resistors. However, the Shulman reference teaches that the advantage of using variable/adjustable resistors in a circuit is flexibility in controlling the gain of the circuitry (Figure 3A, Col. 4, lines 42-46). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the circuit in Figure 7A of the McQuaid et al. reference by using variable/adjustable resistors instead of fixed resistors as taught by the Shulman reference for the purpose of flexibility controlling the gain of the circuitry. Thus, this modification meets all the limitations of claims 2 and 3 that the first output resistors and/or the second output resistors are variable/adjustable resistors.

5. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over McQuaid et al. (USP 5,757,227) in view of Shulman (USP 6,304,128).

With respect to claim 4, the circuit (6) in Figure 7A of the McQuaid et al. reference meets all the limitation of this claim as discussed above with regard to the 102 rejection, and that the input resistor (213) coupled to the non-inverting input (+) of the comparator 73 (Col. 10, line 7-19) and the inverting input (-) of the op-amp (73) coupled to ground (by way of 232 and 120). The circuit 6 in Figure 7A of the McQuaid et al. reference does not disclose that the inverting input of the op-amp coupled to the input resistor and the non-inverting input of the op-amp is coupled to a reference potential. However, it is old and well-known in the art that the reverse

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polarity (i.e., between the inverting and non-inverting terminals) of an op-amp would only results in a reverse polarity output of the op-amp (i.e., between inverting and non-inverting output).

Therefore, it would have been obvious to one having skill in the art at the time the invention was made to modify the circuit (6) in Figure 7A of the McQuaid et al. reference by reverse polarity for all the inputs of all the op-amp (i.e., by interchange the inverting and non-inverting terminals of the op-amp 73) for the purpose of obtaining a desired or required output of the circuitry, depending on the needs of the circuit designer, i.e. this is deemed to be a routine design expedients for those having ordinary skill in the art of op-amp, filter and/or integrator design. Thus, this modification meets all the limitations of claim 4 including the inverting input of the op-amp coupled to the input resistor and the non-inverting input of the op-amp is coupled to a reference potential.

6. Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over McQuaid et al. (USP 5,757,227) as applied to claim 4 above and further in view of Shulman (USP 6,304,128).

With respect to claims 5 and 6, the modification of circuitry 6 in Figure 7A as discussed above with regard to the rejection of claim 4 meets all the limitations of these claims except for the limitation that the first and second output resistors are adjustable/variable resistors.

However, the Shulman reference teaches that the advantage of using variable/adjustable resistors in a circuit is flexibility in controlling the gain of the circuitry (Figure 3A, Col. 4, lines 42-46).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the above modification (the modification of Figure 7A of the McQuaid et al. reference discussed in claim 4 above) by using variable/adjustable resistors

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instead of fixed resistors as taught by the Shulman reference for the purpose of flexibility controlling the gain of the circuitry. Thus, this modification meets all the limitations of claims 5 and 6 that the first output resistors and/or the second output resistors are variable/adjustable resistors.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directly to Examiner Long Nguyen whose telephone number is (571) 272-1753. The Examiner can normally be reached on Monday to Friday from 8:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tim Callahan, can be reached at (571) 272-1740. The fax number for this group is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

December 9, 2004



Long Nguyen
Primary Examiner
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